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10/598,556	09/05/2006	Thomas Zeng	129250-002283	7224

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EXAMINER	
DUBASKY, GIGI L	
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2421	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/598,556	ZENG ET AL.	
	Examiner	Art Unit	
	GIGI L. DUBASKY	2421	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 November 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-9,12-17 and 20-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-9,12-17 and 20-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Claims 2, 10-11 and 18-19 had been previously cancelled.

Claims 25-27 has been newly added.

Claims 1, 4-9, 12-17 and 20-27 are pending.

1. Applicant's arguments in the Remarks filed on 11/30/2010 have been fully considered but they are not persuasive.

In response to applicants' arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Deshpande discloses one or more playlist are created by adding one or more designated video segments of user interest from a video as well as display instructions (Figure 7) and prefetch instructions (Figures 8 and 10), and each playlist 114 (Figure 1) includes video segments 116 from different videos 110 which are stored on different servers 104 (¶ [0049]), which means that Deshpande's playlist includes information about a number of individual video segments from different videos (media clips) stored at different servers. Therefore, Deshpande's playlist, pointing to different videos stored at different servers, can be interpreted as a multidimensional pointer as claimed. When

a user requests the playback a created playlist, one or more messages are sent from the user's device to one or more the servers to retrieve segments in the playlist (¶ [0055] lines 1-12). Deshpande discloses the symbol Si (with i=1,...,N) refers to the ith video segment 116 in the playlist 114 (Figure 1) (which can be referred as media indices in a playlist), symbols Sti and Eti for timecode values (i.e., clipBegin and clipEnd attributes) on the video clip timeline, and symbol **Bi** (i.e., mediaSize attribute) for **amount of data** to be prefetched (¶ [0104] lines 4-13). Therefore, the Sti and Eti indicate the beginning and ending points of video segment of interest in the timeline of the video, which can be referred as relative time offsets. Deshpande also discloses for each designated video segment in the playlist 814 (Figure 8), the client sends an RTSP PLAY request with the Normal Play Time (npt)=Sti-Eti to the server to retrieve the content of segment (¶ [0105] lines 1-5) according to the each respective prefetch instruction in the playlist in order to substantially reduce or even eliminate the delay (¶ [0080]). For example, an RTSP PLAY request with the npt=St1-Et1 for the video segment S1 is sent in parallel with another request with npt=St2-Et2 for the video segment S2, then video data corresponding to segment S1 and S2 are streamed to the client and buffered; after finishing playback video segment S1, the client sends an RTSP PLAY request with npt=(St2+Ts2)-Et2 for the video segment S2 in parallel with another RTSP PLAY request with npt=St3-Et3 for the video segment S3, then the playback for video segment S2 is start immediately while video data corresponding to segment S3 is streaming to the client and buffered, and repeating the process for each subsequent segment in the playlist (¶ [0105]-[0106]). By reading the claim in a

reasonable broadest sense, Deshpande's RTSP PLAY request for one after another video segment in the playlist is a RTSP-compliant PLAYLIST_PLAY navigation message as claimed.

Schulzrinne discloses the RTSP PLAY message from the client to the server includes fields such as playlist identifier (URL), Range header... and also a time parameter (which is missing from Deshpande reference) specifying a time in UTC at which the playback should start (see section 10.5) or a time at which the operation is to be made effective (see section 12.29).

Chaudhuri discloses the teaching of using an (n+1)-tuple structure (which is missing from Deshpande and Schulzrinne references) for data stored in the database system.

Brenchner discloses media clips in a storage organized into a hierarchical arrangement having a plurality of levels (which is missing from Deshpande, Schulzrinne and Chaudhuri references).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 4-9, 12-17 and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deshpande (US 2005/0071881) of the record in view of Schulzrinne (RFC 2326 – Real Time Streaming Protocol (RTSP), April 1998) of the record, Chaudhuri et al (US 2003/0018615) and further in view of Brenchner et al (US 6741996).

Regarding claim 1, Deshpande discloses a method for retrieving digital multimedia content from a network node, comprising:

receiving a Real-Time Streaming Protocol (RTSP)-compliant PLAYLIST_PLAY navigation message (Deshpande discloses when a user requests the playback a created playlist, one or more messages are sent from the user's device to one or more the servers to retrieve segments in the playlist (¶ [0055] lines 1-12). Deshpande discloses the symbol Si (with i=1,…,N) refers to the ith video segment 116 in the playlist 114 (Figure 1), symbols Sti and Eti for timecode values (i.e., clipBegin and clipEnd attributes) on the video clip timeline (which can be referred as relative time offsets), and symbol **Bi** (i.e., mediaSize attribute) for **amount of data** to be prefetched (¶ [0104] lines 4-13). Deshpande also discloses for each designated video segment in the playlist 814 (Figure 8), the client sends an RTSP PLAY request with the Normal Play Time (npt)=Sti-Eti to the server to retrieve the content of segment (¶ [0105] lines 1-5) according to the each respective prefetch instruction in the playlist in order to substantially reduce or even eliminate the delay (¶ [0080]). For example, an RTSP PLAY request with the npt=St1-Et1 for the video segment S1 is sent in parallel with another request with npt=St2-Et2 for the video segment S2, then video data corresponding to segment S1

and S2 are streamed to the client and buffered; after finishing playback video segment S1, the client sends an RTSP PLAY request with npt=(St2+Ts2)-Et2 for the video segment S2 in parallel with another RTSP PLAY request with npt=St3-Et3 for the video segment S3, then the playback for video segment S2 is start immediately while video data corresponding to segment S3 is streaming to the client and buffered, and repeating the process for each subsequent segment in the playlist (¶ [0105]-[0106]). By reading the claim in a reasonable broadest sense, Deshpande's RTSP PLAY request for one after another video segment in the playlist is a RTSP-compliant PLAYLIST_PLAY navigation message as claimed) at said network node (¶ [0046] lines 1-4 for transmitting data from client to server and vice versa through one or more intermediate nodes on the network), that includes at least one multidimensional pointer, said multidimensional pointer associated with a media clip in a depository of digital multimedia content (Deshpande discloses one or more playlist are created by adding one or more designated video segments of user interest from a video as well as display instructions (Figure 7) and prefetch instructions (Figures 8 and 10), and each playlist 114 (Figure 1) includes video segments 116 from different videos 110 which are stored on different servers 104 (¶ [0049]), which means that Deshpande's playlist includes information about a number of individual video segments from different videos (media clips) stored at different servers. Therefore, Deshpande's playlist, pointing to different videos stored at different servers, can be interpreted as a multidimensional pointer as claimed), said navigation message further including a relative time offset within said media clip (see Figures 8 and 10 for including in the playlist a list of display and prefetch instructions

including the starting and ending frames (as "relative time offset") of each video segment 116 (Figure 7) in form of a time code (¶ [0075] lines 8-9)); and transferring digital multimedia content to a digital multimedia device by said network node from a particular content source identified by said multidimensional pointer (see Figure 1; ¶ [0046] lines 1-4 and step 1310 in Figure 13), said transferring commencing at a time indicated (¶ [0102], ¶ [0104] lines 4-8 and ¶ [0105]-[0108]).

Deshpande does not explicitly disclose the message including a timing parameter operable to indicate when said message is to be activated by said network node, does not disclose the (n+1)-tuple structure and does not disclose the depository of data is organized into a nested hierarchical arrangement having a plurality of levels.

Schulzrinne (in the memo of RFC2326 - Real Time Streaming Protocol (RTSP)) discloses the RTSP PLAY message from the client to the server includes fields such as source identifier or playlist identifier (URL), Cseq, Section and Range (wherein the Range header defines npt, smpte or clock values), and also includes a time parameter specifying a time in UTC at which the playback should start (see section 10.5) or a time at which the operation is to be made effective (see section 12.29).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Deshpande's RTSP message to include a time parameter as taught by Schulzrinne, so to help the system in synchronization of streams obtained from different sources and to allow the client to get more control in multimedia transmission.

The combined system of Deshpande and Schulzrinne discloses RTSP PLAY message includes playlist identifier (URL), address source of video segment from a video (media clip), clipBegin, clipEnd (relative time offsets) and a time parameter, but fails to disclose (n+1)-tuple structure of data, which means the combined system fails to discloses implementing those data in a (n+1)-tuple structure.

Chaudhuri discloses an (n+1)-tuple structure for data stored in the database system (¶ [0002] and [0006]-[0011]), which means Chaudhuri discloses implementing data in the Tuple structure.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the combined system of Deshpande and Schulzrinne with the teaching of Chaudhuri about implementing tuple data structure, so to take advantage of Tuple in data structure such as tuple is faster than list and has a write protection.

The combined system of Deshpande, Schulzrinne and Chaudhuri does not explicitly disclose the depository of multimedia content is organized into a nested hierarchical arrangement having a plurality of levels.

Brenchner discloses a system of managing media clips which are stored and organized into a hierarchical collection in computer storage (Col 1 lines 5-10 and Col 2 lines 5-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the combined system of Deshpande, Schulzrinne and Chaudhuri with the teaching of Brenchner about media clips file stored

in a hierarchical storage, so to provide an quick and easy way in managing and searching an organized data.

Regarding claim 4, Deshpande in view of Schulzrinne, Chaudhuri and further in view of Brenchner discloses the method as discussed in the rejection of claim 1. The combined system further discloses a first level of said depository of digital multimedia content comprises at least one server-side playlist identified by a uniform resource locator (taught by Deshpande; ¶ [0003] lines 4-8, ¶ [0027] lines 5-6 and ¶ [0049] lines 10-16; and also taught by Schulzrinne; see URLs defined in section 10.5).

Regarding claim 5, Deshpande in view of Schulzrinne, Chaudhuri and further in view of Brenchner discloses the method as discussed in the rejection of claim 4. The combined system further discloses at least one server-side playlist includes one or more media clips, each being identified by a corresponding media source identifier and a relative time offset within said media clip (taught by Deshpande; ¶ [0004], ¶ [0075], ¶ [0049] and ¶ [0112] and see Figures 1, 7-8 and 10).

Regarding claim 6, Deshpande in view of Schulzrinne, Chaudhuri and further in view of Brenchner discloses the method as discussed in the rejection of claim 1. The combined system further discloses the digital multimedia device accesses said network node over at least one of a wire line network, a wireless network, or a cable network (taught by Deshpande; ¶ [0046] lines 4-16 and ¶ [0116]).

Regarding claim 7, Deshpande in view of Schulzrinne, Chaudhuri and further in view of Brenchner discloses the method as discussed in the rejection of claim 1. The combined system further discloses digital multimedia device comprises at least one of: digital music players, digital video players, computers or handheld communication devices enabled to accept streaming media (taught by Deshpande; see Figure 14; ¶ [0005] lines 4-9 and ¶ [0114]-[0117]).

Regarding claim 8, Deshpande in view of Schulzrinne, Chaudhuri and further in view of Brenchner discloses the method as discussed in the rejection of claim 1. The combined system further discloses the timing parameter (taught by Schulzrinne; section 10.5 and 12.9) is operable to assume a value selected from the group consisting of: NOW, END OF CLIP, END OF PLAYLIST (The claim language "group consisting of" does not require all limitations are met. It is taught by Deshpande; ¶ [0106]-[0108] for playing back to back video segments in the playlist with the npt value indicated when the next segment is played which means that the next segment is played right at the end frame/clip of the previous segment. This meets the limitation of "END OF CLIP". Moreover, Schulzrinne also discloses the normal play time can be set to NOW value for live feed request (section 3.6). Therefore, the request to play in real-time from the clients with the npt set to NOW is interpreted as when the request is satisfied corresponding to the NOW value of the npt time).

Regarding claim 9, all limitations of claimed system in claim 9 are analyzed corresponding to the functionalities of claim 1. So claim 9 is rejected on the same ground as claim 1.

Regarding claim 12, all limitations of claimed system in claim 12 are analyzed corresponding to the functionalities of claim 4. So claim 12 is rejected on the same ground as claim 4.

Regarding claim 13, all limitations of claimed system in claim 13 are analyzed corresponding to the functionalities of claim 5. So claim 13 is rejected on the same ground as claim 5.

Regarding claim 14, all limitations of claimed system in claim 14 are analyzed corresponding to the functionalities of claim 6. So claim 14 is rejected on the same ground as claim 6.

Regarding claim 15, all limitations of claimed system in claim 15 are analyzed corresponding to the functionalities of claim 7. So claim 15 is rejected on the same ground as claim 7.

Regarding claim 16, all limitations of claimed system in claim 16 are analyzed corresponding to the functionalities of claim 8. So claim 16 is rejected on the same ground as claim 8.

Regarding claim 17, Deshpande in view of Schulzrinne, Chaudhuri and further in view of Brenchner discloses a digital multimedia device which all functionalities are analyzed and rejected corresponding to the discussion in the rejection of claim 1. The combined system further discloses a logic for receiving a Real-Time Streaming Protocol (RTSP)-compliant PLAYLIST PLAY message (taught by Deshpande; ¶ [0105]-[0108] and ¶ [0113]-[0114]) and a player engine (taught by Deshpande; element 106 in Figure 1 or element 220 in Figure 2 or elements 1414 and 1416 in Figure 14).

Regarding claim 20, Deshpande in view of Schulzrinne, Chaudhuri and further in view of Brenchner discloses the device as discussed in the rejection of claim 17. The combined system further discloses a first level of said plurality of media identifier dimensions comprises a uniform resource locator identifying a server-side playlist (taught by Deshpande; ¶ [0003] lines 4-8, ¶ [0027] lines 5-6 and ¶ [0049] lines 10-16; also taught by Schulzrinne in the section 10.5).

Regarding claim 21, Deshpande in view of Schulzrinne, Chaudhuri and further in view of Brenchner discloses the device as discussed in the rejection of claim 20. The combined system further discloses a second level of said plurality of media identifier

dimensions comprises at least one of a media source identifier for identifying a particular media clip (taught by Brenchner; see Figure 10) within said server-side playlist (taught by Deshpande; ¶ [0049] for playlist is stored at the server).

Regarding claim 22, Deshpande in view of Schulzrinne, Chaudhuri and further in view of Brenchner discloses the device as discussed in the rejection of claim 21. The combined system further discloses the multidimensional pointer (Deshpande's playlist(s) 114 or multidimensional data of Jordan in Figures 1-2) includes a relative time offset (starting and ending frames in Figure 7 of Deshpande) within said particular media clip (Deshpande's video segments 116).

Regarding claim 23, Deshpande in view of Schulzrinne, Chaudhuri and further in view of Brenchner discloses the device as discussed in the rejection of claim 17. The limitations of claim 23 are analyzed and rejected corresponding to the discussion in the rejection of claim 6.

Regarding claim 24, Deshpande in view of Schulzrinne, Chaudhuri and further in view of Brenchner discloses the device as discussed in the rejection of claim 17. The limitations of claim 24 are analyzed and rejected corresponding to the discussion in the rejection of claim 8.

4. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deshpande (US 2005/0071881) of the record in view of Schulzrinne (RFC 2326 – Real Time Streaming Protocol (RTSP), April 1998) of the record, Chaudhuri et al (US 2003/0018615), Brenchner et al (US 6741996) and further in view of Greeff et al (US 2005/0128508).

Regarding claim 25, Deshpande in view of Schulzrinne, Chaudhuri and further in view of Brenchner discloses the method as discussed in the rejection of claim 1. The combined system discloses the RTSP message including at least one (n+1)-tuple multidimensional pointer comprises playlist identifier (URL), video segment identifier (clip index), the beginning and ending frames (relative time offset), and a time parameter (see the discussion in the rejection of claim 1). The combined system does not explicitly disclose 3-tuple of data.

Greeff discloses a data request is a 3-tuple (x,y,z), where x identifies the resource (referring as URI) of the document data to be retrieve, y is an offset in the resource data and z is the amount of data to retrieve starting at y (¶ [0030]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the message of the combined system of Deshpande, Schulzrinne, Chaudhuri and Brenchner to comprise a 3-tuple of data as taught by Greeff, so to provide a more specific tuple data structure with a defined number of parameters in tuple structure in order to take advantage of Tuple in data structure such as tuple is faster than list and has a write protection.

Regarding claims 26-27, all limitations of claims 26-27 are analyzed and rejected corresponding to claim 25.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GIGI L. DUBASKY whose telephone number is (571)270-5686. The examiner can normally be reached on Monday through Thursday from 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN W. MILLER can be reached on 571-272-7353. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GD

/Hunter B. Lonsberry/
Primary Examiner, Art Unit 2421